

Claims

1. Method for printing a carrier material (96), whereby a printing drum (10a) having a plurality of depressions (12, 14) for the acceptance of printing fluid (30, 34) arranged on the surface of the printing drum (10a) rotates around its longitudinal axis during a printing event, printing fluid (30, 34) is introduced by an inking station (54) into depressions (12, 14) moving past the inking station (54), printing fluid (34) from some of the depressions (14) moving past a transfer printing location (92) is employed at said transfer printing station (92) for printing the carrier material, and printing fluid (30) remains in the rest of the depressions (12), printing fluid (30) is removed by a cleaning station (100) from depressions (12, 14) moving past the cleaning station (100), and whereby the cleaning station (100) and the inking station (54) are simultaneously in operation during the printing event.
2. Method according to claim 1, characterized in that the cleaning station (100) contains a cleaning drum (102) that lies parallel to the printing drum (10a) and whose surface touches the surface of the printing drum (10a) in a cleaning region (202) during cleaning; and in that the surface of the cleaning drum (102) is manufactured of an elastic or absorbent material.
3. Method according to claim 2, characterized in that the cleaning drum (102a) carries a potential (U2) that differs from a potential (U1) on the surface of the printing drum (10a).
4. Method according to claim 2 or 3, characterized in that the cleaning station (100b) contains a stripper drum (206) that lies parallel to the cleaning drum (102b) and whose surface exerts pressure onto the surface of the cleaning drum (102b) in a stripping region (212); and in that the surface of the stripper drum (102) is fabricated of a hard material (200).
5. Method according to one of the preceding claims, characterized in that the emptied depressions are cleaned with a cleaning fluid (216) after the removal of the printing fluid from depressions moving past the cleaning station (100b) and before the introduction of printing fluid into depressions moving past the inking station (54b).

6. Method according to claim 5, characterized in that the cleaning station (214) contains a cleaning container (216) with a cleaning fluid (218) that is preferably arranged under the printing drum (10b); and in that depressions moving past the cleaning container (216) immerse into the cleaning fluid (218).

5 7. Method according to claim 5 or 6, characterized in that printing fluid is employed as cleaning fluid.

8. Method according to claim 6 or 7, characterized in that the cleaning fluid (216) is moved by additional measures, preferably by introduction of ultrasound (220).

10 9. Method according to one of the preceding claims, characterized in that the cleaning station (100d) contains a blower unit (260) that, with the assistance of air, displaces printing fluid out of the depressions (12, 14) moving past the cleaning station (100d).

15 10. Method according to one of the preceding claims, characterized in that the cleaning station (100e) contains a suction unit (270) with whose assistance air is sucked in, said air entraining printing fluid from the depressions (12, 14) moving past the cleaning station (100e).

20 11. Method according to one of the preceding claims, characterized in that the printing fluid removed with the assistance of the cleaning station (100) is collected; and in that the collected printing fluid is conducted to the inking station (54).

12. Method according to claim 11, characterized in that the printing fluid (56) is cleaned and/or rejuvenated.

25 13. Printer device (50) for printing a carrier material (96), comprising a printing drum (10a) rotating around its longitudinal axis during the printing event and on whose surface a plurality of depressions (12, 14) for the acceptance of printing fluid (30, 34) are arranged,
an inking station (54) for introducing printing fluid (30, 34) into depressions (12, 14) that move past the inking station (54),
a transfer printing station (94) at which printing fluid (34) from some of the
30 depressions (14) moving past the transfer printing location (92) is employed for

printing the carrier material, and at which the printing fluid (30) remains in the rest of the depressions (12) moving past the transfer printing station (94),
a cleaning station (100) for removing printing fluid (30) from depressions (12) that move past the cleaning station (100),

5 and comprising a control unit for the actuation of the cleaning station (100) and of the inking station (54),

characterized in that the control unit simultaneously places the cleaning station (100) and the inking station (54) into operation during the printing event.

14. Printer device (50) according to claim 13, characterized by a cleansing
10 station (214) for cleansing the depressions emptied in the cleaning station (100b) with a cleaning fluid (216).

15. Printer device (50) according to claim 13 or 14, characterized in that the cleaning station (100) contains a cleaning drum (102, 102a) that lies parallel to the printing drum (10a, 10b, 10c) and whose surface touches the surface of the printing
15 drum (10a) in a cleaning region (202); and in that the surface of the cleaning drum (102a) preferably carries a different potential (U2) than the surface of the printing drum (10c).

16. Printer device (50) according to claim 15, characterized in that the cleaning station (100b) contains a stripper drum (206) that lies parallel to the cleaning
20 drum (102b) and whose surface presses onto the surface of the cleaning drum (102b) in a stripping region (212).

17. Printer device (50) according to one of the claims 13 through 16, characterized in that the cleaning device (100d) contains a blower unit (260) with whose assistance air is blown into the depressions (12, 14) moving past the cleaning
25 station (100d); and/or in that the cleaning station (100e) contains a suction unit (270) with whose assistance air is sucked out of the depressions (12, 14) moving past the cleaning station (100e).

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